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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,814	01/24/2002	Howard V. Goetz	4828-58032	2487

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EXAMINER

CHEN, PO WEI

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,814

Applicant(s)

GOETZ, HOWARD V.

Examiner

Po-Wei (Dennis) Chen

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

In response to an Amendment received on March 12, 2004. This action is final.

Claims 1-30 are pending in this application. Claims 1, 10, 14, 19, 23, 26 and 28 are independent claims.

The present title of the invention is "Image Compensation Methods and Apparatus Using Corrections Zones".

The Group Art Unit of the Examiner case is now 2676. Please use the proper Art Unit number to help us serve you better.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4, 9-12, 14-16, 23-24, 26-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Braudaway et al. (US 6,208,753; refer to as Braudaway herein).

3. Regarding claim 1, Braudaway discloses a method of processing quality digitized images comprising:

A display processor (element 116 of Fig. 1 and lines 46-49 of column 4);

An image signal input configured to receive an input image value associated with a display pixel (lines 5-15 of column 4);

An interpolator configured to determine at least one correction value associated with the display pixel based on horizontal interpolation using predetermined correction values (lines 1-11 of column 3 and lines 18-24 of column 11);

A data combiner configured to combine the input image value with the correction value to produce a corrected image value (line 12-16 of column 3 and 24-32 of column 11; while claim recites data combiner, it is noted that the corrected pixel value is defined in combination of the correction offset and the values of the pixel color of the input image).

4. Regarding claim 4, Braudaway discloses a method of processing quality digitized images comprising:

Interpolator is configured to determine the at least one correction value based on horizontal interpolation and vertical interpolation using the predetermined correction values (lines 1-11 of column 3).

5. Regarding claim 9, Braudaway discloses a method of processing quality digitized images comprising:

A memory configured to store the predetermined correction values (lines 18-21 of column 11 and Fig. 1; while claim recites memory, it is noted that by saving the values in a storage performs the same).

6. Regarding claim 10, Braudaway discloses a method of processing quality digitized images comprising:

An image corrector (lines 26-30 of column 11);

A memory configured to store predetermined correction values (lines 18-21 of column 11 and Fig. 1; while claim recites memory, it is noted that by saving the values in a storage performs the same);

A processor configured to compute correction values associated with a display pixel based upon a horizontal and a vertical location of the pixel in an image (lines 1-11 of column 3 and Fig. 1).

7. Regarding claim 11, statements presented above, with respect to claim 1 are incorporated herein.

8. Regarding claim 12, statements presented above, with respect to claim 4 are incorporated herein.

9. Regarding claim 14, statements presented above, with respect to claims 1 and 10 are incorporated herein. Furthermore, Braudaway discloses at least one display panel configured to receive corrected image values (Fig. 1).

10. Regarding claim 15, Braudaway discloses a method of processing quality digitized images comprising:

The predetermined correction values are associated with display zones, and the correction system is configured to interpolate in first subzones and second subzones of the display zones (lines 45-48 of column 5 and lines 28-34 of column 8 and Fig. 2-4).

11. Regarding claim 16, Braudaway discloses a method of processing quality digitized images comprising:

A horizontal increment is adjusted based on an associated incremental change of horizontal increment per row (lines 25-38 of column 6; it is noted that the expanding size is done by increasing both horizontally and vertically for each row).

12. Regarding claim 23, statements presented above, with respect to claim 14 are incorporated herein. Furthermore, Braudaway disclose applying the correction value to an image value associated with the selected pixel (lines 30-32 of column 11).

13. Regarding claim 24, statements presented above, with respect to claim 4 are incorporated herein.

14. Regarding claims 26 and 27, statements presented above, with respect to claims 14-15 are incorporated herein. Furthermore, Braudaway disclose dividing an image into zones; establishing predetermined correction values associated with the zones; obtaining a correction value associated with a pixel by horizontal interpolation and vertical interpolation within a zone; and applying the correction value to an image value associated with the pixel (lines 45-48 of column 5 and lines 28-34 of column 8 and Fig. 2-4)

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 19-22 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braudaway et al. (US 6,208,753; refer to as Braudaway herein).

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17. Regarding claim 19, Braudaway discloses a method of processing quality digitized images comprising:

A display interpolator (lines 1-11 of column 3);

An input configured to receive a set of predetermined correction values (lines 19-21 of column 11; while claim recites input to receive, it is clear that the system receives previously saved values for computation performs the same);

A horizontal increment adder configured to apply a horizontal increment to at least one of the predetermined correction values to produce an output correction value (lines 18-30 of column 11; while claim recites horizontal increment adder and applying horizontal increment, it would have been obvious to one of ordinary skill in the art to realize that by applying horizontal offset to generate corrected values performs the same).

18. Regarding claim 20, statements presented above, with respect to claim 19 are incorporated herein. Furthermore, Braundaway discloses a change of horizontal increment per row (lines 33-40 of column 11; it is noted that the process is performed for each row).

19. Regarding claim 21, Braudaway discloses a method of processing quality digitized images comprising:

A vertical increment adder configured to apply a vertical increment to at least one of the predetermined correction values (lines 18-30 of column 11; while claim recites vertical increment adder and applying vertical increment, it would have been obvious to one of ordinary skill in the art to realize that by applying vertical offset to generate corrected values performs the same).

20. Regarding claim 22, statements presented above, with respect to claim 21 are incorporated herein. Furthermore, Braudaway discloses a change of vertical increment per column (lines 33-40 of column 11; it is noted that the process is performed for each pixel of the row which corresponds to each column).

21. Regarding claim 28, statements presented above, with respect to claims 1, 19, 21 and 23 are incorporated herein.

22. Claims 2-3, 5-8, 13, 17-18, 25 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braudaway et al. (US 6,208,753; refer to as Braudaway herein) as applied to claims 1, 10, 14, 23 above, and further in view of Deguchi et al. (US 6,480,202; refer to as Deguchi herein).

23. Regarding claims 2 and 3, Braudaway does not disclose to sum the correction value with the input image value to produce the corrected image value and to produce the corrected image data value based on a product of the correction value and the input image value. Deguchi teaches an image processing device utilizing the method (lines 57-67 of column 2, lines 1-5 of column 3 and lines 3-15 of column 9; it is noted that the image value is generated by multiplying the gain with the input values and adding the offset). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Deguchi to provide advantage of properly correcting images (lines 47-50 of column 4, Deguchi). Also, both Braudaway and Deguchi are directed to a method of correcting images.

24. Regarding claims 5-6, statements presented above, with respect to claims 2-3 are incorporated herein.

25. Regarding claims 7 and 8, Braudaway discloses a method of processing quality digitized images comprising:

Interpolator is configured to determined at least a first correction value and a second correction value associated with a display pixel based on horizontal interpolation using the predetermined correction values, wherein the first correction value and the second correction value correspond to offset and the interpolator is configured to determine the first correction value and the second correction value based on horizontal interpolation and vertical interpolation using the predetermined correction values (lines 1-11 of column 3 and lines 18-24 of column 11).

Braudaway does not disclose a gain. Deguchi teaches an image processing device utilizing the method (lines 3-15 of column 9). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Deguchi to provide advantage of properly correcting images (lines 47-50 of column 4, Deguchi). Also, both Braudaway and Deguchi are directed to a method of correcting images.

26. Regarding claim 13, statements presented above, with respect to claim 3 are incorporated herein. While claim recites a multiplier, it is clear that Deguchi discloses a method, an apparatus and a medium adapted to perform the method such as multiplying to correct the image.

27. Regarding claims 17-18, statements presented above, with respect to claim 7 are incorporated herein.

28. Regarding claim 25, statements presented above, with respect to claim 7 are incorporated herein.

29. Regarding claim 29-30, statements presented above, with respect to claim 7 are incorporated herein.

Response to Arguments

30. Applicant's arguments filed March 12, 2004 have been fully considered but they are not persuasive.

The Applicant argues reference Braudaway does not teach or disclose using predetermined correction values to produce a correction value and combining the correction value with the input image value to produce a corrected image value. However, this is known in the art taught by Braudaway (lines 1-16 of column 3 and lines 18-32 of column 11). It is noted that the horizontal and vertical offsets computed using previously saved coefficient corresponds to predetermined correction values. And the negatives of the interpolated horizontal and vertical offsets correspond to correction value which is used to interpolate a corrected pixel value. Since the claim does not disclose any other limitation on the predetermined correction values, the term is broad enough to include the horizontal and vertical offsets which are determined prior calculating the corrected pixel (image) value. And correction value can be broadly defined as any value used in assisting calculation of corrected pixel value. Thus, limitation of claim is met.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Po-Wei (Dennis) Chen whose telephone number is (703) 305-8365. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 7:00 PM.

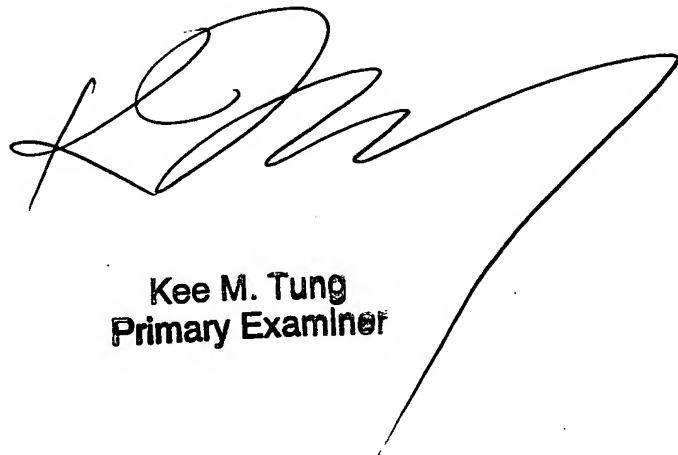
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C Bella can be reached on (703) 308-6829. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Po-Wei (Dennis) Chen
Examiner
Art Unit 2676

Po-Wei (Dennis) Chen
May 26, 2004

A handwritten signature in black ink, appearing to read 'K. M. Tung', with a long, sweeping horizontal stroke extending to the right.

Kee M. Tung
Primary Examiner